

CLAIMS:

1. A method for calibrating an electrophoretic display panel (1) comprising a plurality of pixels (2) capable of representing at least two optical states by receiving driving signals (30), comprising the steps of:
 - displaying a first calibration image (22) containing said optical states in a first arrangement
 - 5 on said electrophoretic display panel;
 - providing driving signals (30) to said pixels (2) corresponding to a required image (23) resulting in a second calibration image (24) containing said optical states in a second arrangement on said electrophoretic display panel (1);
 - comparing said second calibration image (24) with said required image (23) to determine
 - 10 differences (26) between said second calibration image (24) and said required image (23);
 - adjusting said driving signals (30) in accordance with said differences such that said second calibration image (23) and said required image (24) match.
2. The method according to claim 1, wherein said optical states are grey levels.
- 15 3. The method according to claim 1 or 2, wherein said driving signals corresponding to said required image are provided such that all possible optical state transitions are involved in comparison with said first calibration image.
- 20 4. The method according to claim 1 or 2, wherein said first arrangement and said second arrangement comprise one or more blocks (25) of individual pixels or groups of pixels of said display panel.
5. The method according to claim 4, wherein said blocks substantially entirely
- 25 cover said electrophoretic display.
6. The method according to claim 1 or 2, further comprising the step of recording said second calibration image by a CCD-camera (21) to determine said differences between said second calibration image and said required image .

7. The method according to claim 1 or 2, wherein said electrophoretic display panel comprises a look-up table (11) with driving signals corresponding to transitions between said optical states for said pixels and said method further comprises the step of
5 modifying said look-up table in accordance with said adjusted driving signals.
8. The method according to claim 1 or 2, wherein said driving signals comprise driving voltages (33), and/or reset voltages (32) and/or pre-pulse voltages (31) and said adjustment involves modifying the magnitude and/or duration of said voltages and/or
10 changing or introducing periods between the driving voltages and/or introducing additional voltage pulses.
9. The method according to claim 1 or 2, wherein said step of displaying said first calibration image (22) comprises the steps of:
15 - recording said first calibration image and comparing said first calibration image with a further calibration image;
- adjusting said driving signals such that said first calibration image and said further calibration image match.
- 20 10. The method according to claim 1 or 2, wherein said method further comprises the step of providing further driving signals to said pixels corresponding to further required images and resulting in further calibration images and comparing at least one of said further calibration images with said further required images.
- 25 11. The method according to claim 1 or 2, wherein said method is repeated one or more times after adjusting said driving signals.
12. A display device (D) having an electrophoretic display panel (1) comprising a plurality of pixels (2) capable of representing at least two optical states, said device
30 comprising:
- means (12) for displaying a first calibration image (22) containing said optical states in a first arrangement on said electrophoretic display panel (1);
- means (12) to provide driving signals (30) to said pixels corresponding to a required image (23) having as a result a second calibration image (24) containing said optical states in a

second arrangement, and

- means (12) for adjusting said driving signals (30) to match said second calibration image (24) and said required image (23).

5 13. The display device (D) according to claim 12, wherein said optical states are grey levels.

14. The display device (D) according to claim 12 or 13, wherein said device further comprises a look-up table (11) with driving signals corresponding to transitions
10 between said optical states for said pixels and said means for adjusting said driving signals are adapted to modify said look-up table in accordance with said adjusted driving signals.

15. A method for calibrating an electrophoretic display panel (1) comprising a pixel (2) capable of representing at least two optical states by receiving driving signals (30),
15 comprising the steps of:
- displaying a first optical state for said pixel on said electrophoretic display panel (1);
- providing a driving signal (30) to said pixel corresponding to a required optical state having as a result said first optical state or a second optical state for said pixel on said electrophoretic display panel
20 - comparing said resulting first or second optical state with said required optical state for said pixel to determine a difference between said resulting first or second optical state and said required optical state;
- adjusting said driving signal in accordance with said difference such that said resulting first or second optical state and said required optical state of said pixel match.

25

16. A display device (D) having an electrophoretic display panel (1) comprising a pixel (2) capable of representing at least two optical states by receiving driving signals (30), said device comprising:
- means (12) for displaying a first optical state for said pixel on said electrophoretic display
30 panel (1);
- means (12) to provide a driving signal (30) to said pixel corresponding to a required optical state having as a result said first optical state or a second optical state for said pixel on said electrophoretic display panel, and

- means (12) for adjusting said driving signal (30) to match said resulting first optical state or second optical state and said required optical state.